

**Utility Patent
Ser. No 10/033,862**

REMARKS

Reconsideration of the application as amended is respectfully requested.

The previous Supplemental Amendment was entered after discussions with the previous Examiner Kimberly Shaw. In those discussions it was indicated that the proposed amendment would result in issuance, which was its motivation. Currently, by knowledge, information and belief applicant understands that Examiner Shaw is no longer available at the USPTO, hence a new examiner currently reviewing this prosecution has resulted in additional discussions concerning patentability.

Further, an interview with the current Examiner Price was conducted on September 19, 2007. That meeting in which Examiner's Swaytek and Manson were also present, a number of issues were discussed for review and clarification. Applicant wishes to extend tremendous gratitude to Examiners Price, Swaytek and Manson for their time and input in the process to assist in clarifying technical issues. For purposes of making of record some of the conclusions what were drawn from the input of the expertise of the Office, it was applicant's understanding that the following issues were discussed and resolved:

- "matrix" is not new matter in that it is mentioned in the original specification and in an original claim. The term "matrix" is synonymous in the industry to the word "web". As such, "web" will not be rejected as 'new matter.
- Discussion was had concerning how to adequately describe the location of the cling enhancing substance onto the fibers within the matrix (as opposed to on the outer surfaces). It was suggested that "charged within" may not adequately

**Utility Patent
Ser. No 10/033,862**

describe the process due to connotations that come with the word "charge" and what it means. Examiner Swayteck suggests, and applicant has herein amended the claims to an alternative "placed within" a matrix of the web

- Applicant further clarified that in the current innovation (1) the bonded highloft web has the ability to mechanically entrap captured particles; and (2) the tacky or sticky cling agent has ability to further cling to or mechanically entrap captured particles. Several references were informally presented concerning filters and diapers. It was clarified that diapers are intended to hold liquids in, and hence the present invention would be counter intuitive to such a goal. Further other art areas were discussed (with other references that did not predate the priority date of this application and disclosed only surfactant added to the fibers to assist fluid or fibers to pass through), namely (a) carpets are a complex woven, not nonwoven; further, they are not intended to be treated with cling or sticky substances that trap or hold particles (b) filters, in which there is no impervious coplanar layer.
- It was pointed out that in claim 1 the nonwoven layer mechanically traps particles, but the claim doesn't imply that the cling enhancing substance works in conjunction
- The term "externally" applied was discussed as meaning the web or fibers do not have the inherent characteristic. It was suggested that the specification fails to adequately disclose how the cling enhancing substance is applied. It was argued

**Utility Patent
Ser. No 10/033,862**

that one skilled in the art would read the specification, as amended, and understand that one cannot apply adhesive to filaments prior to or contemporaneous to nonwoven being made because it would cause filaments to stick together and deform the open pore feature.

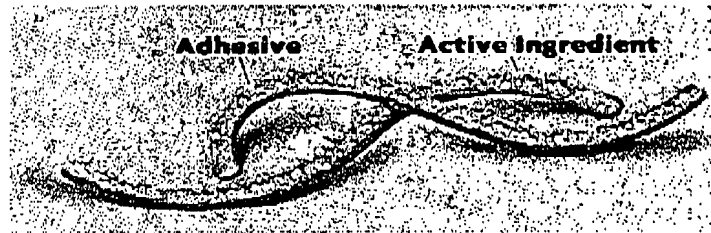
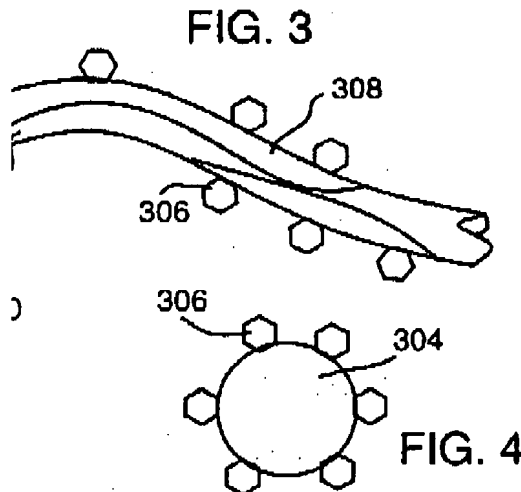
- There was some concern about what "chemically inert" means. It was discussed that "chemically inert" is relative to the nonwoven and to the cling agent, and to the cling agent mechanically clinging or holding onto solid dry particles. All the components of the preloaded highloft web entrapping system are all relatively "chemically inert to each other until exposed to various intended fluids such as water or air depending on the desired choice. It was clarified that the cling enhancing substance is sticky and attached to filaments themselves while capable of receiving and mechanically holding or clinging onto any entering dry particulates whether from household soils, pcts, etc, or if preloaded with dry active ingredients of choice.

According to the present invention the attachment of varying sized solid particulates (306) of DRY ACTIVE INGREDIENTS to inert strand or filament of highloft nonwoven (304) that has first been treated with a cling agent (308) that dries tacky and is chemically inert to the receiving dry actives (306) that ADHERE to the tack and highloft filaments, strands, and interstices. The present invention is the application of dry particulates directly to the inert fibers of the very open, much less dense high loft nonwoven, previously treated with cling agent and requires no use of heating of the active

**Utility Patent
Ser. No 10/033,862**

ingredients so as not to degrade, and comprises at least one high-loft non-woven layer, the first of which forms a top layer to a stationary non-woven pad. A plastic liquid impervious layer forms a bottom to the pad. At least one of the high-loft non-woven layers has its fibers treated with cling material and an odor-reducing substance.

Utility Patent
Ser. No 10/033,862



Coarse absorbent particles (either the same or different from the odor-reducing substance) are also contained between at least one of the high-loft non-woven layers and the bottom layer.

For further clarification and to assist this new examiner, applicant, as one particularly knowledgeable in the art of high-loft, non wovens, wishes to clarify a number of issues concerning terms of art that are known to one skilled in the relevant art. The present invention claims the use of a particle entrapment pad comprising *preformed, bonded, high loft non-absorbent nonwoven* top layer. A nonwoven is cited at <http://www.inda.org/about/directoryquest.pdf>. Per INDA Supplier and Manufacturer List, (See Sec. 2.4 Suppliers by types of structures(highlofts)) wherein web forming structures is a separate category and highlofts is a separate type of finished, nowoven type of rolled good, in that category as compared to other types of nonwovens..

Notice this is NOT diaper or carpeting, but is a distinct type or category of Nonwoven. Per INDA Glossary, the definition of Highloft is a "General term for low density, thick or bulky

Utility Patent
Ser. No 10/033,862

fabrics, as compared to flat, paper-like fabrics. It is characterized by a high ratio of thickness to weight per unit area. Highloft battings have no more than 10% solids by volume and are greater than 2mm (0.13 inches) in thickness." This would eliminate diapers and carpets.

Nowovens have technical definitions by various organizations. ASTM defines a nonwoven as a "a textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical or solvent means and combinations thereof..." Note that the term does not include paper, or fabrics which are woven, knitted, tufted, or those made by wool or other felting processes. ASTM D123, D-13 (1970). Further, INDA offers a more current, revised definition: "Nonwoven fabrics are generally defined as sheet or web structures made by bonding and or interlocking fibers, yarns or filaments by mechanical, thermal, chemical or solvent means." The European trade association EDANA has a concurrent definition which includes additional limitations, namely,

"Nonwovens are distinguished from paper, notably by the bulk and rupture energy criteria as outlined as follows (in order of ease of control). A. if it is made of 100% manmade fibers, or then b. if its bulk index is above 7 or if its total rupture energy index is higher than 7 joules or then c. if together its total rupture index is between 7 and 1.2 joules AND its bulk index between 7 and 2."

See also INDA trade association, the trade association of the nonwoven fabrics industry, at www.inda.org, and specifically, http://www.inda.org/category/nwn_index.html.

In the trade, 'nonwovens' have a particular technical meaning that excludes carpet or anything that requires the converting of fibers to yarn, etc. The nonwoven top layer is first specifically described on page 5, lines 10-11. Page 6, line 2 indicates that the pad is "treated with" substance to enhance its particle entrapping nature. This "treated with" language appears

**Utility Patent
Ser. No 10/033,862**

again at page 14, line 18. Further, page 7, line 10-11 and FIG. 1A and 1B indicate 'applied' ingredients are "added ingredients". Further, page 10, line 20 and page 13, line 12 indicate that the tackifier is "applied" and "applied to the fibers", respectively.

For example, Ahlstrom Air Media is a current supplier and manufacturer of bonded 'hi-loft nonwovens and needlepunch medias for a variety of applications', by their own description. Ahlstrom Air Media is the current successor in interest to the company formerly known as HOLINEE as referenced in the original application at page 10, lines 18-19.

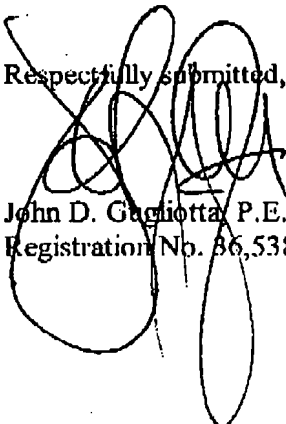
Further, page 10, lines 11-13 indicate a variety of preformed high loft non-wovens that can be manufactured in a variety of thicknesses and densities.

Finally, applicant wishes to reference that an additional Information Disclosure Statement is being submitted under separate cover to include any and all references available from INDA that may or may not be relevant to the background art of high-loft nonwovens. While applicant did not have this information available at the time of filing, and does not currently feel that there is anything contained therein that would affect the patentability of the present invention, Applicant is providing such 'background' information for purposes of providing an abundance of clarity to his application.

In view of the above remarks, it is believed that all the grounds of rejection are overcome and that the application has now been placed in full condition for allowance. Should there be any further questions or reservations, Examiner is urged to telephone Applicant's undersigned attorney at (330) 659-0065.

**Utility Patent
Ser. No 10/033,862**

Respectfully submitted,


John D. Gagliotta, P.E., Esq.
Registration No. 86,538

Patent, Copyright & Trademark Law Group, LLC
USPTO Customer No. 33055
6100 Oak Tree Boulevard
Suite 200
Independence, OH 44131
(330) 253-2225
Facsimile (330) 253-6658